TRANSLATION IN ENGLISH OF THE PUBLICATION

A METHOD OF ACQUIRING AUDIOVISUAL CONTENT DESCRIPTION

DATA, A SYSTEM, A BROADCAST SERVER, A DESCRIPTION

5   SERVER, AND A RECEIVER TERMINAL FOR IMPLEMENTING THE

METHOD

     The present invention relates to a method of

acquiring description data about broadcast audiovisual

content. The invention also relates to a system, a

10   broadcast server, a description server, and a receiver

terminal for implementing the method.

     More precisely, the present invention relates to a

method of the type comprising:

     · a step in which a receiver terminal transmits at

15   least one request for information to at least one

server of audiovisual content descriptions; and

     · a step of the receiver terminal receiving

description data supplied in response to elements of

the request.

20   Such description data acquisition methods are

generally implementing in description servers that are

accessible via the Internet. The Internet site of an

audiovisual content broadcast channel thus proposes

searching for audiovisual content that might be of

25   interest to a user with the help of a search engine

included in a home page.

     Nevertheless, if a user desires to receive

description data relating to audiovisual content as

broadcast by a plurality of channels, the user must

30   navigate to a plurality of Internet sites in order to

make a plurality of requests.

     An object of the invention is to remedy that

drawback by providing a method of acquiring description

data while facilitating the step of transmitting

35   information requests in order to obtain the desired

description data.

To this end, the invention provides a description data acquisition method of the above-specified type, characterized in that it includes a prior step of acquiring and storing in the receiver terminal at least
5 one initial information request comprising the address of at least one audiovisual content description server and a step of generating the request on the basis of the previously-acquired initial request.

Thus, since the receiver terminal is capable of
10 storing some number of initial requests, the step of request generation makes it possible to use a common interface for transmitting one or more requests.

Optionally, a description data acquisition method of the invention includes the characteristic whereby
15 during the reception step, audiovisual content description data is supplied as a function of a relationship between at least one date and time associated with the request and the broadcast date and time of the audiovisual content.

20 An advantage of this acquisition method is that it enables description data to be received relating to audiovisual content broadcast at a particular time, or within a particular time period, without it being necessary to identify or reference any particular
25 audiovisual content.

In addition, a description data acquisition method of the invention may comprise one or more of the following characteristics:

· the date and time associated with the request
30 corresponds to the date and time at which the request is transmitted;

· the request as transmitted is identical to the initial request;

· during the request generation step, the initial
35 request is extended by specifying at least one date and time;

· during the step of receiving description data the data supplied is that corresponding to audiovisual content broadcast at the date and time specified in the request;

5 · during the request generation step, the initial request is extended by specifying a number of content items, and during the reception step, the data supplied corresponds to the requested number of audiovisual content items broadcast starting from the date and time

10 specified in the request;

· during the request generation step, the initial request is extended by specifying a time interval, and during the reception step, the data supplied relates to audiovisual content broadcast in the time interval

15 specified in the request;

· the time interval is defined by a start date and time and by an end date and time;

· the time interval is defined by a start date and time and by a duration;

20 · during the request generation step, the initial request is extended by specifying keywords corresponding to the names of description elements for broadcast audiovisual content;

· following the step of receiving description

25 data, the method returns to the request generation step in order to generate at least one new request associated with a new date and a new time corresponding to the end-of-broadcast date and time for the audiovisual content for which description data has just

30 been received;

· the step of acquiring and storing an initial request comprises downloading said request from a description server;

· the step of acquiring and storing an initial

35 step comprises the receiver terminal receiving said initial request via a signaling channel associated with an audiovisual content broadcast channel;

· the step of acquiring and storing an initial
request comprises a broadcast server supplying an SDP
type file corresponding to an address field of a
description server;

5 · the description data is supplied in the form of
an XML file;

· the request is associated with a single
audiovisual content broadcast channel;

· while generating the request for transmission, a
10 set of broadcast channels is defined, and during
transmission step, as many requests are transmitted as
there are broadcast channels specified in the request.

The invention also provides a system for acquiring
description data for broadcast audiovisual channels,
15 the system comprising at least one receiver terminal
for receiving audiovisual content and at least one
audiovisual content description server, the system
being characterized in that the receiver terminal
includes means for acquiring and storing at least one
20 initial information request comprising the address of
at least one description server, means for generating a
request on the basis of the initial request, and means
for transmitting said request to the description
server, and in that the description server includes
25 means for transmitting to the receiver terminal
description data supplied as a function of the request.

The system of the invention may further include or
more of the following characteristics:

· the description server includes means for making
30 an initial request available; and

· the system includes at least one audiovisual
content broadcast server, said server including means
for transmitting initial requests together with the
broadcast content.

35 The invention also provides an audiovisual content
broadcast server for implementing a description
acquisition method as described above, characterized in

that it includes transmission means for transmitting initial requests together with the broadcast content.

A broadcast server of the invention may further comprise the characteristic whereby the transmission
5   means are regular transmission means.

The invention also provides a receiver terminal for receiving audiovisual content to implement a description data acquisition method as described above, characterized in that it includes means for storing an
10   initial request and means for generating a request to be transmitted on the basis of the initial request.

Finally, the invention also provides an audiovisual content description server for implementing a description data acquisition method as described
15   above, the server being characterized in that it includes means for making an initial request available.

The invention will be better understood on reading the following description given purely by way of example and made with reference to the accompanying
20   drawing, in which:

· Figure 1 is a diagram of a description data acquisition system of the invention; and

· Figure 2 shows the steps in a method of acquiring description data implemented by the system of
25   Figure 1.

The system shown in Figure 1 comprises at least one broadcast server 10 suitable for programmed broadcasting of audiovisual content to a receiver terminal 12. A plurality of broadcast servers 10 may
30   transmit programmed audiovisual content to the receiver terminal 12, said terminal having a plurality of reception channels.

In this example, broadcasting takes place over a conventional data transmission network such as the
35   Internet. It could also take place over a radio broadcast network, by cable, or by satellite. The transmission network is represented by reference 14.

Audiovisual content description servers 16 are also connected to the Internet 14 in order to exchange data with the receiver terminal 12.

Each of these servers may be associated with a
5   particular broadcast server or else with a set of broadcast servers. They are adapted to provide data describing audiovisual content in response to requests that are transmitted to them by the receiver terminal 12.

10   The system described above serves to implement the method shown in Figure 2.

The method comprises a first step of the receiver terminal receiving and storing initial requests. This first step is represented by references 20, 22, and 24.
15   It is subdivided into three different acquisition steps that can be executed independently of one another, simultaneously or at different times.

A first step 20 of acquiring an initial request comprises downloading such a request from one of the
20   description servers 16. The downloaded request comprises at least an identifier of the broadcast source of audiovisual content corresponding to the description server.

A second step 22 of acquiring an initial request
25   comprises the terminal 12 receiving said request in a signaling channel associated with the audiovisual content broadcast channel used by the broadcast server 10. Under such circumstances, the initial request is transmitted to the receiver terminal 12 in repeated
30   manner, preferably regularly, so that the user of the receiver terminal 12 can store it in the terminal when so desired.

Finally, a third step 24 of acquiring an initial request comprises the broadcast server 10 supplying the
35   receiver terminal 12 with a file of the session description protocol (SDP) type and corresponding to the source of audiovisual content. To do this, it

suffices to add a field to the file of SDP type in order to supply the address of the description server 16 to be contacted in order to obtain the description data relating to the broadcast content. This is
5 possible when the broadcast server 10 broadcasts audiovisual content via a network such as the Internet 14.

An initial request stored by the receiver terminal 12 comprises at least an identifier for a broadcast
10 source and may take one of the following forms, for example:

· http://kaas.example.com/scripts/metadata.xml? ServiceId="tv1000201"&UTC=

·

15 http://kass.example.com/channel_one/metadata.xml? date_time=

· http://kaas.example.com/scripts/channel_two.xml? time=

In the first example, the identifier of the
20 broadcast source is recorded as a parameter of the request (parameter ServiceId="tv1000201"). In the second example, the identifier of the broadcast source is a specific folder of the request ("channel_one"). In the third example, the identifier of the broadcast
25 source corresponds to a file name ("channel_two").

In each of the examples, the initial request includes a parameter that the user can optionally extend during the following step in order to specify a date and a time (parameter UTC, date_time, or time).
30 Following the initial request acquisition steps 20, 22, and 24, the method moves onto a step 26 of generating requests for transmission on the basis of these previously-acquired initial requests.

The central unit of the receiver terminal 12
35 includes a program for generating these requests. This program is implemented in conventional manner via a single man-machine interface for the purpose of

extending the initial request stored by the receiver terminal 12.

For example, the interface may give the user the option of choosing a set of broadcast channels in which the request is to be made. The system then generates as many requests as there are broadcast channels defined in the set.

Optionally, the interface may give the user the option of inputting a date and a time. By way of example, the date and the time are considered by the system as being the dates and times for broadcasting audiovisual content for which the user seeks to obtain description data.

When such a date and time are not specified, the requests that are generated are associated with the date and time at which they are transmitted.

Also optionally, the user can specify a time interval, either by giving a new date and a new time, or by specifying a duration. Thus, the requests will be considered, for example, as requests for acquiring description data for audiovisual content broadcast in full or in part during said user-defined time interval.

A complete request may thus take the following form:

· http://kaas.example.com/channel_one/ metadata.xml?date_time="1997-07-16T20:20:45.4321Z" &duration="T02:00:00.0000Z"

Such a request comprises not only the broadcast source ("channel_one"), but also a date (July 16, 1997), a time (8:20 PM and 45.4321 seconds) and an additional parameter referred to as "duration".

The parameter duration="T02:00:00.0000Z" indicates that the user seeks to receive the description data for audiovisual content that is to be broadcast in full or in part between the specific date and time and the instant given by said specified data and time plus the

duration given in the parameter, following the keyword "duration".

Also optionally, the user may extend requests by adding a parameter for specifying whether the user desires to receive description data relating to any audiovisual content broadcast before or after the date and time associated with the request.

The complete request can thus take the following form:

- http://kaas.example.com/channel_one/ metadata.xml?date_time="1997-07-16T20:20:45.4321Z" &range="+0+2"

In addition to the broadcast source ("channel_one"), such a request contains a date (July 16, 1997), a time (8:20 PM and 45.4321 seconds), and an additional parameter referred to as "range".

The parameter range="+0+2" indicates that the user desires to receive description data for three items of audiovisual content, the item broadcast at the date and time specified in the request, together with the following two items.

Conventionally, requests can also be extended with keywords that are to be found in the description data desired by the user, or keywords specifying a search domain.

More precisely, the keywords that can be inserted in the request can be the names of elements that appear in the description data for content sent in response by the description servers 16, such as, for example, the elements: "Title" and "Keyword", which are defined, for example, in the metadata specified by the TV Anytime forum.

Several selection criteria can be added to the initial request in compliance with the syntax rules used for Internet requests (separator "&" for the AND Boolean operator, etc.).

Thereafter the method moves onto step 28 of transmitting requests. As many requests are transmitted as there are broadcast channels specified by the user during the request generation step. Thus,

5   if a plurality of description servers 16 are specified by the user request, each generated request is transmitted to a corresponding description server.

Finally, during a last step 30, the receiver terminal 12 receives the description data for

10   audiovisual content corresponding to the request transmitted during the preceding step. This description data is preferably received in a standard format, for example the format defined by the TV Anytime forum.

15   Optionally, following this step 30 and depending on a selection made by the user, for example, the method may return to step 26 of generating requests in order to generate new requests associated with a new date and a new time corresponding to the end-of-

20   broadcasting date and time for the audiovisual content for which description data has just been received.

It can clearly be seen that a method of acquiring description data for audiovisual content as implemented by the above-described system enables the description

25   data request to be transmitted automatically in association with at least one date and time to be associated automatically with description data relating to audiovisual content broadcast at a date and a time corresponding to that of the request.

30